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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
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| 10/805,857   | 03/22/2004  | Valerie Bonnardel    | SPG6615PDUS                  | 1721             |
| 27624  | 7590        | 12/10/2008           |                              |                  |
| AKZO NOBEL INC.<br>LEGAL & IP<br>120 WHITE PLAINS ROAD, SUITE 300<br>TARRYTOWN, NY 10591 |             |                      | EXAMINER<br>KAROL, JODY LYNN |                  |
|  |             |                      | ART UNIT                     | PAPER NUMBER     |
|  |             |                      | 1617                         |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/805,857

## Applicant(s)

BONNARDEL ET AL.

## Examiner

Jody L. Karol

## Art Unit

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 4/24/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/309)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Receipt is acknowledged of applicant's Amendment/Remarks filed 4/24/2008.  
Claims 1-22 have been amended and are currently under consideration.

### ***Information Disclosure Statement***

1. The references EP 1 389 459 A and JP 09-278644 have been considered to the extent of the English abstracts provided with the Applicant's remarks filed 4/24/2008.

### **WITHDRAWN REJECTIONS**

2. In view of Applicant's amendments and remarks, the objections to the specification in regards to the title, abstract, and arrangement of the specification are herein withdrawn.
3. In view of Applicant's amendments, the rejection of claims 21 and 22 under 25 U.S.C. 112, 2nd paragraph for being indefinite are herein withdrawn.

### **MAINTAINED REJECTIONS**

The following rejections have been maintained from the previous Office Action dated 9/20/2007:

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Müller et al. (US 6,248,338 B1) in view of Chiu et al. (US 4,977,252).

Claims 1-20 are directed towards compositions comprising two modified starch components: (a) a first component comprising at least one pregelatinized, crosslinked starch selected from a C<sub>2</sub>-C<sub>5</sub> hydroxyalkyl starch and a C<sub>2</sub>-C<sub>18</sub> acyl starch; and (b) a second component comprising at least one starch derivative containing a hydrophobic group or both a hydrophilic group and a hydrophobic group, which has been degraded by reaction with an exo-enzyme capable of cleaving 1,4- $\alpha$ -D-glucosidic linkages from non-reducing ends of starch, but incapable of cleaving 1,6- $\alpha$ -D-glucosidic linkages of starch.

Müller et al. is important for teaching compositions for the cleaning or caring for the skin, teeth, or hair containing the first component (a) of the instant claims. Müller et al. teaches compositions comprising an aqueous phase containing a pregelatinized, crosslinked starch selected from C<sub>2</sub>-C<sub>5</sub> hydroxyalkyl starch and a C<sub>2</sub>-C<sub>18</sub> acyl starch as claimed in the instant claims 1, 8-12, and 17-18 (see abstract and claim 1). Müller et al. also teaches that the starch can be crosslinked via phosphorylation in which the

starch is reacted with phosphorous oxychloride, phosphorous pentoxide, or sodium trimetaphosphate as claimed in the instant claims 2-4 (see column 2, lines 46-52), or via reaction with C<sub>4</sub>-C<sub>18</sub> alkane or alkene dicarboxylic acids as claimed in the instant claim 2 (see column 2, lines 55-58). Particularly preferred starches derivatives mentioned are hydroxypropyl di-starch phosphate and acetylated di-starch adipate as claimed in the instant claims 5-7, 14, 16, and 19-20 (see column 3, lines 27-30 and claims 2-3). Müller et al. further teaches that the pregelatinized, hydroxypropyl di-starch phosphate is prepared from a waxy maize starch as claimed in the instant claims 14 (see examples), and that composition contain inorganic salt additives, such as Epsom salt as claimed in the instant claims 17 and 19 (see column 8, 39-45 and examples, particularly 4-6, and 46). Waxy maize starch is synonymous with waxy corn starch. It is also noted that instant claims 17 and 19 are directed to compositions that contain **up to** 10% salt, and compositions that meet all other limitations, but do not contain any salt, also fall under these claims.

The instant claims differ from the Müller et al. reference in that the instant claims contain an additional starch component (b). While Müller et al. does not specifically teach the starch of component (b), it is indicated that the composition can be used in conjunction with other starches, including modified starches (see column 5, lines 19-22).

Chiu et al. teaches modified starches useful for emulsifying industrial products that comprise a starch derivative containing a hydrophobic group of both a hydrophilic group and a hydrophobic group, which has been partially degraded by an exo-enzyme capable of cleaving 1,4- $\alpha$ -D glucosidic linkages from non-reducing ends of the

starch, but incapable of cleaving 1,6-alpha-D glucosidic linkages of the starch (see abstract and claim 1). The modified starch taught by Chiu et al. is identical to the component (b) starch as claimed in the instant claims 1-7, 12, and 17-18. Chiu et al. further teaches in a preferred embodiment that the starch is derivitized with an alkenyl cyclic dicarboxylic acid, specifically octenylsuccinic anhydride as claimed in the instant claims 8-9, 13-16, and 19-20 (see column 6, lines 3-4 and 29-31 and claim 5). Chiu et al. also teaches that the enzyme used to degrade the starch is beta-amylase as claimed in the instant claims 10-11, 14-16, and 19-20, but that other enzymes such as exo-alpha-1,4 glucosidase, exo-1,4-alpha-D-glucan maltotetrahydrolase, or exo-1,4-alpha-D-glucan maltohexahydrolase may be used to prepare the starch as additionally mentioned in the instant claim 10 (see column 7, lines 1-9 and claim 3). Chiu et al. also indicates that waxy maize (corn) starch may be used to prepare the starch derivative as claimed in the instant claim 14 (see column 5, lines 29-31 and claim 4), and that the starch may be converted to a water-fluidity (WF) of up to about 60 as claimed in the instant claim 12 (see claim 2).

Müller et al. (US 6,248,338 B1) and Chiu et al. (US 4,977,252) are considered to be analogous art because they both teach starch derivatives that can be used as emulsifiers for similar applications. Müller et al. teaches that the starch derivative acts as a stability improver and emulsifier or coemulsifier for cosmetic or personal care compositions such as compositions for cleaning or caring for the skin, teeth or hair (see abstract and column 5, lines 24-28). Müller et al. further indicates that the starch raw materials have long been used in foods and are non-toxic (see column 8, lines 47-54).

Chiu et al. also teaches that the modified starches have emulsification properties, and are present in emulsions with improved stability (see claim 1). Chiu et al. indicates that the starch emulsifiers have applicability in industrial products, specifically in food or beverage products, but that they also can be utilized in other non-food end uses (see abstract and column 5, lines 20-24). This falls under cosmetic and personal care compositions as claimed in the instant claims 17-20.

The starch derivatives of component (a) and component (b) are both well known starches in the art, with well-known emulsification properties. It is obvious to combine individual compositions taught to have the same utility to form a new composition for that very same purpose (*In re Kerkhoven*, 626 F.2d 846, 205 U.S.P.Q 1069 (C.C.P.A. 1980)). Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to combine the starch derivative as taught by Müller et al. with the starch derivative as taught by Chiu et al. to obtain an emulsifier composition suitable for cosmetic and personal care compositions.

In addition, claim 16 claims a specific ratio of the starch components (a) and (b). The result-effective adjustment in conventional working parameters (e.g., determining an appropriate amount of the components within the composition) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

***Response to Arguments***

5. Applicant's arguments filed 4/24/2008 have been fully considered but they are not persuasive.

Applicant argues that the amendment of claim 1 to state the emulsifier provides stability to a cosmetic or personal care composition when stored for at least one month at an elevated temperature of 45°C is not taught by the cited prior art. In response, it is respectfully submitted that the claimed composition would obviously have this property. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties the applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

The Applicant further argues that Muller only teaches stable emulsions can be achieved when the starch is used with another emulsifier, and the starch is not taught to have emulsifying properties by itself. In response, it is respectfully submitted that the starch has emulsifying properties by itself, and that another emulsifier need not be present. The recitation of "(co) emulsifier" to characterize the starch is interpreted as the starch functions as "co-emulsifier" or "emulsifier." Furthermore, Muller et al. explicitly teach that due to the action of the starch as a (co) emulsifier "it is possible to reduce the quantity of surface active emulsifiers" and "in certain cases there is no need for surface-active emulsifiers" (see column 5, lines 55-59).



The Applicant also argues that Chiu et al. teach the modified starch provides emulsification properties under cool storage conditions, but that such stability is not sufficient for cosmetic or personal care applications wherein the product must exhibit stability for 1 month at or of 45°C. In response, it is respectfully submitted that while Chiu et al. do teach the modified starch provides emulsification properties at cool temperatures (see Examples) it does not preclude the modified starch from having stability at higher temperatures. The Examples taught by Chiu et al. are used to demonstrate the modified starch is superior to starch derived products, which are known to be less stable than gum arabic in refrigerated storage and in freeze-thaw cycles (see column 2, lines 19-36). Thus, Applicant's arguments are not convincing.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the compositions are substantially surfactant free except for the starch emulsifier and synergistic enhanced stability) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, it is noted that in combining the starch and modified starch emulsifiers, up to an additive emulsifying effect is expected.

Thus, for these reasons, Applicant's arguments are found unpersuasive. Said rejection is maintained.

***Conclusion***

All claims have been rejected; no claims are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Correspondence***

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jody L. Karol whose telephone number is (571)270-3283. The examiner can normally be reached on 8:30 am - 5:00 pm Mon-Fri EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Jody L. Karol/

Examiner, Art Unit 1617

/SREENI PADMANABHAN/  
Supervisory Patent Examiner, Art Unit 1617

